TIMEX 2068 STD ROM SYSTEM VARS MAPS AFTER BOOT (STD-RES)

This is a complete list of operating system configuration variables used by the TS-2068 original ROM. The first version of this document was written using an AERCO disk interface running CP/M in a WordStar word processor. Now, I converted it to PDF format, to be introduced to the Timex user group for the 40th anniversary of the Timex 2068.

Personally, I have used it for many years as the main reference for the analysis and study of the ROM.

It contains a detail of each of the variables supported by the original operating system of the ZX Spectrum (TS-2048) and the additional variables used only by the extended operating system of the TS-2068.

All the values of the variables correspond to the cold start of the operating system.

Please, if you find any error or suggestion, please do not hesitate to contact me or send me an email to correct the document.

I want to especially thank Mr. David Anderson for his hard work in searching, ordering and sharing all the Timex information available and making it accessible to users of these computers around the world.

Sincerely

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HEX	DEC	LABEL	VALUE	COMMENT
5C00	(23552)	KSTATE [0] =	FF	; Keyb. Character Key Pressed.
5C01	(23553)	KSTATE [1] =	00	; Keyb. Time Till Counts as Released.
5C02	(23554)	KSTATE [2] =	00	; Keyb. Time Till Repeat.
5C03	(23555)	KSTATE [3] =	00	; Keyb. Code When Repeats.
5C04	(23556)	KSTATE [4] =	FF	; Keyb. Character Key Pressed II.
5C05	(23557)	KSTATE [5] =	00	; Keyb. Time Till Counts as Released II
5C06	(23558)	KSTATE [6] =	00	; Keyb. Time Till Repeat II.
5C07	(23559)	KSTATE [7] =	00	; Keyb. Code When Repeats II.
5C08	(23560)	LASTK =	00	; Stores newly pressed key.

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HEX   DEC     LABEL       VALUE  COMMENT

5C09 (23561) REPDEL      = 23    ; Keyboard Delay Time Before Repeat (50ths.)

5C0A (23562) REPPER      = 05    ; Keyboard Delays between successive Repeats

5C0B (23563) DEFADD      = 0000  ; Address of arguments of user defined function

5C0D (23565) KDATA       = 00    ; 2nd byte of color controls

5C0E (23566) TVDATA [0]  = 00    ; TV controls Key Byte

5C0F (23567) TVDATA [1]  = 00    ; TV First Data Byte of AT or TAB controls

5C10 (23568) STRMS [-3]  = 0001  ; Offset to system stream "HID-K   Keyboard"

5C12 (23570) STRMS [-2]  = 0006  ; Offset to system stream "HID-S   Screen"

5C14 (23572) STRMS [-1]  = 000B  ; Offset to system stream "HID-R   Ram Ins."

5C16 (23574) STRMS  [0]  = 0001  ; Offset to system stream "COM-ST  Commands"

5C18 (23576) STRMS  [1]  = 0001  ; Offset to stream        "INP-ST  Input Data"

5C1A (23578) STRMS  [2]  = 0006  ; Offset to stream        "PR-ST   Screen"

5C1C (23580) STRMS  [3]  = 0010  ; Offset to stream        "LPR-ST  Printer"

5C1E (23582) STRMS  [4]  = 0000  ; Offset to stream #4

5C20 (23584) STRMS  [5]  = 0000  ; Offset to stream #5

5C22 (23586) STRMS  [6]  = 0000  ; Offset to stream #6

5C24 (23588) STRMS  [7]  = 0000  ; Offset to stream #7

5C26 (23590) STRMS  [8]  = 0000  ; Offset to stream #8

5C28 (23592) STRMS  [9]  = 0000  ; Offset to stream #9

5C2A (23594) STRMS [10]  = 0000  ; Offset to stream #10

5C2C (23596) STRMS [11]  = 0000  ; Offset to stream #11

5C2E (23598) STRMS [12]  = 0000  ; Offset to stream #12

5C30 (23600) STRMS [13]  = 0000  ; Offset to stream #13

5C32 (23602) STRMS [14]  = 0000  ; Offset to stream #14

5C34 (23604) STRMS [15]  = 0000  ; Offset to stream #15

5C36 (23606) CHARS       = 3C00  ; Pointer to ROM CHSET - 0100h

5C38 (23608) RASP        = 40    ; Keyboard Error Buzz Constant

5C39 (23609) PIP         = 00    ; Keyboard Click Constant

5C3A (23610) ERRNR       = 00    ; Basic Run Time (ERROR Code-1)

5C3B (23611) FLAGS       = 10    ; Various Basic Flags

5C3C (23612) TVFLAG      = 21    ; Various Basic TV Flags

5C3D (23613) ERRSP       = 61F8  ; SP Reset Value used for error return

5C3F (23615) LISTSP      = 0000  ; SP Reset Value used for automatic Listing return
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HEX    DEC      LABEL        VALUE  COMMENT

5C41 (23617) MODE         = 00    ; Keyboard Mode (K L C F G E)

5C42 (23618) NEWPPC       = 0000  ; Line to be Jump to.

5C44 (23620) NSPPC        = 00    ; Statement number in line to be jumped to.

5C45 (23621) PPC          = 0000  ; Line number of statement currently being executed.

5C47 (23623) SUBPPC       = 00    ; Number within line of statement being executed.

5C48 (23624) BORDCR       = 38    ; Border Color / ATTR for Lower Half of Screen

5C49 (23625) EPPC         = 0000  ; Line Number of Current line in Listing (Prog. Cursor).

5C4B (23627) VARS         = 6856  ; Pointer to Variable Area

5C4D (23629) DEST         = 0000  ; Pointer to Variable in Assignment.

5C4F (23631) CHANS        = 6840  ; Pointer to Channel Table in RAM

5C51 (23633) CURCHL       = 6840  ; Currently Channel used for Input/Output

5C53 (23635) PROG         = 6856  ; Address of Start BASIC Program Area

5C55 (23637) NXTLIN       = 0000  ; Address of NEXT Line in BASIC

5C57 (23639) DATADD       = 6855  ; Address Terminator of LAST Data Value

5C59 (23641) ELINE        = 6857  ; Address of the EDIT Line

5C5B (23643) KCUR         = 6857  ; Address of CUURSOR

5C5D (23645) CHADD        = 0000  ; Address of Character to be Interpreter

5C5F (23647) XPTR         = 0000  ; Address of character after ? marker

5C61 (23649) WORKSP       = 6859  ; Address of temporary work space.

5C63 (23651) STKBOT       = 6859  ; Address of bottom of CALC Stack

5C65 (23653) STKEND       = 6859  ; Address of Start of spare space.

5C67 (23655) BERG         = 00    ; Calculator B Register

5C68 (23656) MEM          = 5C92  ; Address of CALC Memory Area

5C6A (23658) FLAGS2       = 10    ; Basic Flags 2

5C6B (23659) DFSZ         = 04    ; Number of Lines in Lower Screen

5C6C (23660) STOP         = 0000  ; Number of TOP program line in Auto Listing.

5C6E (23662) OLDPPC       = 0000  ; Line Number to which CONTINUE Jumps.

5C70 (23664) OSPPC        = 00    ; Statement in Line which CONTINUE Jumps.

5C71 (23665) FLAGX        = 00    ; Basic Flags used for Assignments

5C72 (23666) STRLEN       = 0000  ; Length of string type destination in Assignment.

5C74 (23668) TADDR        = 0000  ; Address of next item in Syntax Table

5C76 (23670) SEED         = 0000  ; Seed used in RND Generation

5C78 (23672) FRAMES [0]   = B0    ; Frame Counter Low Byte
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HEX    DEC     LABEL       VALUE  COMMENT

5C79  (23673) FRAMES [1] = 00    ; Frame Counter Mid Byte

5C7A  (23674) FRAMES [2] = 00    ; Frame Counter Upper Byte

5C7B  (23675) UDG        = FF58  ; Address of User Defined Graphics in RAM

5C7D  (23677) CORDSX     = 00    ; X-Coordinate used in Screen graphics mode

5C7E  (23678) CORDSY     = 00    ; Y-Coordinate used in Screen graphics mode

5C7F  (23679) PPOSN      = 21    ; X-Coordinate used in Printer (33 Column)

5C80  (23680) PRCC       = 5B00  ; Address of Print Position in Printer Buffer

5C82  (23682) ECHOE      = 1507  ; Column Number / Line Number in lower screen (Input Line)

5C84  (23684) DFCC       = 4000  ; Display File Main Screen Print Position

5C86  (23686) DFCCL      = 50FA  ; Display File Lower Screen Print Position

5C88  (23688) SPOSN      = 21    ; Column Number for PRINT Position

5C89  (23689) SPOSNF     = 18    ; File Number for PRINT Position

5C8A  (23690) SPOSNLC    = 07    ; Column Number for PRINT Position in lower Screen.

5C8B  (23691) SPOSNLF    = 15    ; File Number for PRINT Position in lower Screen.

5C8C  (23692) SCRCT      = 01    ; Scroll Count

5C8D  (23693) ATTRP      = 38    ; Permanent Current Colors

5C8E  (23694) MASKP      = 00    ; Permanent Transparent Color MASK

5C8F  (23695) ATTRT      = 38    ; Temporary Current Colors

5C90  (23696) MASKT      = 00    ; Temporary Transparent Color MASK

5C91  (23697) PFLAG      = 00    ; Basic Flags used in Printing.

5C92  (23698) MEMBOT [0] = 00 00 00 00 00    ; CALC Memory 0

5C97  (23703) MEMBOT [1] = 00 00 00 00 00    ; CALC Memory 1

5C9C  (23708) MEMBOT [2] = 00 00 00 00 00    ; CALC Memory 2

5CA1  (23713) MEMBOT [3] = 00 00 00 00 00    ; CALC Memory 3

5CA6  (23718) MEMBOT [4] = 00 00 00 00 00    ; CALC Memory 4

5CAB  (23723) MEMBOT [5] = 00 00 00 00 00    ; CALC Memory 5

5CB0  (23728) NMI        = 0000  ; Address of NMI Service Routine

5CB2  (23730) RAMTOP     = FF57  ; Address of Last byte of BASIC Area

5CB4  (23732) PRAMT      = FFFF  ; Address of Last byte of Physical RAM

5CB6  (23734) ERRLN      = 0000  ; Line Number of Jump on ERROR Condition

5CB8  (23736) ERRC       = 0000  ; Line Number in which ERROR Occurred

5CBA  (23738) ERRS       = 00    ; Statement number within line with error.

5CBB  (23739) ERRT       = 00    ; ERROR Number (ERROR Reported Byte)
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HEX	DEC	LABEL	VALUE	COMMENT
5CBC	(23740)	SYSCON	= 5EEA	; Pointer to the System Configuration Table
5CBE	(23742)	MAXBNK	= 00	; Number of Expansion Banks in Systems
5CBF	(23743)	CURCBN	= 00	; Current Channel Bank
5CC0	(23744)	MSTBOT	= 6200	; Address of Location Above Initial SP
5CC2	(23746)	VIDMOD	= 00	; Video Mode
5CC3	(23747)	VIDMD1	= 00	; Not USED
5CC4	(23748)	ARSBUF	= 0000	; Point to AROS Buffer
5CC6	(23750)	ARSFLG	= 00	; BASIC AROS Flags
5CC7	(23751)	ADATLN	= 0000	; BASIC AROS DATA Line
5CC9	(23753)	DTLNLN	= 0000	; BASIC AROS Current Length of AROS LINE
5CCB	(23755)	STRMNM	= 00	; Bank Expansion Unit Current STREAM #

SYSCON TABLE

AROS TABLE

HEX	DEC	LABEL	VALUE	COMMENT
5EEA	(24298)	AROSTY	= FF	AROS Language type
5EEB	(24299)	AROTYP	= 00	AROS Cartridge Type
5EEC	(24300)	AROSTA	= FFFF	AROS Starting Address
5EEE	(24302)	AROCHS	= FF	AROS Chunk Specification
5EEF	(24303)	AROAST	= FF	AROS AutoStart Specification
5EF0	(24304)	ARORSV	= FFFF	AROS User Reserved Bytes Area

LROS TABLE

HEX	DEC	LABEL	VALUE	COMMENT
5EF2	(24306)	LROST	= 00	LROS Cartridge Type
5EF3	(24307)	LROSTA	= FFFF	LROS Starting Address
5EF5	(24309)	LROCHS	= FF	LROS Chunk Specification

EXPANSION BANKS TABLE

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EXPANSION BANK # 01

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HEX	DEC	LABEL	VALUE	COMMENT
5EF6	(24310)	BETYPE[01] =	80	BE BANK Type
5EF7	(24311)	BENUMB[01] =	00	BE BANK Number
5EF8	(24312)	BEDEID[01] =	00	BE BANK Dev.ID Specification ''
5EF9	(24313)	BEOPND[01] =	0000	BE BANK OPEN Address
5EFB	(24315)	BECLOS[01] =	0000	BE BANK CLOSE Address
5EFD	(24317)	BESLCT[01] =	0000	BE BANK SELECT Address
5EFF	(24319)	BERDCH[01] =	0000	BE BANK INPUT Address
5F01	(24321)	BEWRCH[01] =	0000	BE BANK OUTPUT Address
5F03	(24323)	BESLVM[01] =	0000	BE BANK DISK SLVM-CFME Commands Address
5F05	(24325)	BEINTR[01] =	0000	BE BANK INTERRUPT Handler
5F07	(24327)	BEINIT[01] =	0000	BE BANK INIT Address
5F09	(24329)	BEREST[01] =	0000	BE BANK RESET Address
5F0B	(24331)	BEFLGS[01] =	00	BE BANK DEVICE FLAGS
5F0C	(24332)	BEBPRI[01] =	00	BE BANK BOOT Priority
5F0D	(24333)	BEIPRI[01] =	00	BE BANK INTERRUPT Priority

EXPANSION BANK # 02

HEX	DEC	LABEL	VALUE	COMMENT
5F0E	(24334)	BETYPE[02] =	00	BE BANK Type
5F0F	(24335)	BENUMB[02] =	00	BE BANK Number
5F10	(24336)	BEDEID[02] =	00	BE BANK Dev.ID Specification ' '
5F11	(24337)	BEOPND[02] =	0000	BE BANK OPEN Address
5F13	(24339)	BECLOS[02] =	0000	BE BANK CLOSE Address
5F15	(24341)	BESLCT[02] =	0000	BE BANK SELECT Address
5F17	(24343)	BERDCH[02] =	0000	BE BANK INPUT Address
5F19	(24345)	BEWRCH[02] =	0000	BE BANK OUTPUT Address
5F1B	(24347)	BESLVM[02] =	0000	BE BANK DISK SLVM-CFME Commands Address
5F1D	(24349)	BEINTR[02] =	0000	BE BANK INTERRUPT Handler
5F1F	(24351)	BEINIT[02] =	0000	BE BANK INIT Address
5F21	(24353)	BEREST[02] =	0000	BE BANK RESET Address
5F23	(24355)	BEFLGS[02] =	00	BE BANK DEVICE FLAGS
5F24	(24356)	BEBPRI[02] =	00	BE BANK BOOT Priority
5F25	(24357)	BEIPRI[02] =	00	BE BANK INTERRUPT Priority

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EXPANSION BANK # 03

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HEX    DEC     LABEL        VALUE   COMMENT

5F26  (24358) BETYPE[03] = 00      BE BANK Type

5F27  (24359) BENUMB[03] = 00      BE BANK Number

5F28  (24360) BEDEID[03] = 00      BE BANK Dev.ID Specification ' '

5F29  (24361) BEOPND[03] = 0000    BE BANK OPEN Address

5F2B  (24363) BECLOS[03] = 0000    BE BANK CLOSE Address

5F2D  (24365) BESLCT[03] = 0000    BE BANK SELECT Address

5F2F  (24367) BERDCH[03] = 0000    BE BANK INPUT Address

5F31  (24369) BEWRCH[03] = 0000    BE BANK OUTPUT Address

5F33  (24371) BESLVM[03] = 0000    BE BANK DISK SLVM-CFME Commands Address

5F35  (24373) BEINTR[03] = 0000    BE BANK INTERRUPT Handler

5F37  (24375) BEINIT[03] = 0000    BE BANK INIT Address

5F39  (24377) BEREST[03] = 0000    BE BANK RESET Address

5F3B  (24379) BEFLGS[03] = 00      BE BANK DEVICE FLAGS

5F3C  (24380) BEBPRI[03] = 00      BE BANK BOOT Priority

5F3D  (24381) BEIPRI[03] = 00      BE BANK INTERRUPT Priority
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EXPANSION BANK # 04

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HEX    DEC    LABEL        VALUE   COMMENT

5F3E  (24382)  BETYPE[04] = 00     BE BANK Type

5F3F  (24383)  BENUMB[04] = 00     BE BANK Number

5F40  (24384)  BEDEID[04] = 00     BE BANK Dev.ID Specification '’’

5F41  (24385)  BEOPND[04] = 0000   BE BANK OPEN Address

5F43  (24387)  BECLOS[04] = 0000   BE BANK CLOSE Address

5F45  (24389)  BESLCT[04] = 0000   BE BANK SELECT Address

5F47  (24391)  BERDCH[04] = 0000   BE BANK INPUT Address

5F49  (24393)  BEWRCH[04] = 0000   BE BANK OUTPUT Address

5F4B  (24395)  BESLVM[04] = 0000   BE BANK DISK SLVM-CFME Commands Address

5F4D  (24397)  BEINTR[04] = 0000   BE BANK INTERRUPT Handler

5F4F  (24399)  BEINIT[04] = 0000   BE BANK INIT Address

5F51  (24401)  BEREST[04] = 0000   BE BANK RESET Address

5F53  (24403)  BEFLGS[04] = 00     BE BANK DEVICE FLAGS

5F54  (24404)  BEBPRI[04] = 00     BE BANK BOOT Priority

5F55  (24405)  BEIPRI[04] = 00     BE BANK INTERRUPT Priority
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EXPANSION BANK # 05

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HEX	DEC	LABEL	VALUE	COMMENT
5F56	(24406)	BETYPE[05] =	00	BE BANK Type
5F57	(24407)	BENUMB[05] =	00	BE BANK Number
5F58	(24408)	BEDEID[05] =	00	BE BANK Dev.ID Specification ''
5F59	(24409)	BEOPND[05] =	0000	BE BANK OPEN Address
5F5B	(24411)	BECLOS[05] =	0000	BE BANK CLOSE Address
5F5D	(24413)	BESLCT[05] =	0000	BE BANK SELECT Address
5F5F	(24415)	BERDCH[05] =	0000	BE BANK INPUT Address
5F61	(24417)	BEWRCH[05] =	0000	BE BANK OUTPUT Address
5F63	(24419)	BESLVM[05] =	0000	BE BANK DISK SLVM-CFME Commands Address
5F65	(24421)	BEINTR[05] =	0000	BE BANK INTERRUPT Handler
5F67	(24423)	BEINIT[05] =	0000	BE BANK INIT Address
5F69	(24425)	BEREST[05] =	0000	BE BANK RESET Address
5F6B	(24427)	BEFLGS[05] =	00	BE BANK DEVICE FLAGS
5F6C	(24428)	BEBPRI[05] =	00	BE BANK BOOT Priority
5F6D	(24429)	BEIPRI[05] =	00	BE BANK INTERRUPT Priority

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EXPANSION BANK # 06

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HEX    DEC    LABEL        VALUE   COMMENT

5F6E  (24430) BETYPE[06] = 00     BE BANK Type

5F6F  (24431) BENUMB[06] = 00     BE BANK Number

5F70  (24432) BEDEID[06] = 00     BE BANK Dev.ID Specification ''

5F71  (24433) BEOPND[06] = 0000   BE BANK OPEN Address

5F73  (24435) BECLOS[06] = 0000   BE BANK CLOSE Address

5F75  (24437) BESLCT[06] = 0000   BE BANK SELECT Address

5F77  (24439) BERDCH[06] = 0000   BE BANK INPUT Address

5F79  (24441) BEWRCH[06] = 0000   BE BANK OUTPUT Address

5F7B  (24443) BESLVM[06] = 0000   BE BANK DISK SLVM-CFME Commands Address

5F7D  (24445) BEINTR[06] = 0000   BE BANK INTERRUPT Handler

5F7F  (24447) BEINIT[06] = 0000   BE BANK INIT Address

5F81  (24449) BEREST[06] = 0000   BE BANK RESET Address

5F83  (24451) BEFLGS[06] = 00     BE BANK DEVICE FLAGS

5F84  (24452) BEBPRI[06] = 00     BE BANK BOOT Priority

5F85  (24453) BEIPRI[06] = 00     BE BANK INTERRUPT Priority
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EXPANSION BANK # 07

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HEX    DEC      LABEL        VALUE   COMMENT

5F86  (24454)  BETYPE[07] = 00      BE BANK Type

5F87  (24455)  BENUMB[07] = 00      BE BANK Number

5F88  (24456)  BEDEID[07] = 00      BE BANK Dev.ID Specification ' '

5F89  (24457)  BEOPND[07] = 0000    BE BANK OPEN Address

5F8B  (24459)  BECLOS[07] = 0000    BE BANK CLOSE Address

5F8D  (24461)  BESLCT[07] = 0000    BE BANK SELECT Address

5F8F  (24463)  BERDCH[07] = 0000    BE BANK INPUT Address

5F91  (24465)  BEWRCH[07] = 0000    BE BANK OUTPUT Address

5F93  (24467)  BESLVM[07] = 0000    BE BANK DISK SLVM-CFME Commands Address

5F95  (24469)  BEINTR[07] = 0000    BE BANK INTERRUPT Handler

5F97  (24471)  BEINIT[07] = 0000    BE BANK INIT Address

5F99  (24473)  BEREST[07] = 0000    BE BANK RESET Address

5F9B  (24475)  BEFLGS[07] = 00      BE BANK DEVICE FLAGS

5F9C  (24476)  BEBPRI[07] = 00      BE BANK BOOT Priority

5F9D  (24477)  BEIPRI[07] = 00      BE BANK INTERRUPT Priority
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EXPANSION BANK # 08

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HEX   DEC     LABEL        VALUE  COMMENT

5F9E  (24478) BETYPE[08] = 00     BE BANK Type

5F9F  (24479) BENUMB[08] = 00     BE BANK Number

5FA0  (24480) BEDEID[08] = 00     BE BANK Dev.ID Specification ''

5FA1  (24481) BEOPND[08] = 0000   BE BANK OPEN Address

5FA3  (24483) BECLOS[08] = 0000   BE BANK CLOSE Address

5FA5  (24485) BESLCT[08] = 0000   BE BANK SELECT Address

5FA7  (24487) BERDCH[08] = 0000   BE BANK INPUT Address

5FA9  (24489) BEWRCH[08] = 0000   BE BANK OUTPUT Address

5FAB  (24491) BESLVM[08] = 0000   BE BANK DISK SLVM-CFME Commands Address

5FAD  (24493) BEINTR[08] = 0000   BE BANK INTERRUPT Handler

5FAF  (24495) BEINIT[08] = 0000   BE BANK INIT Address

5FB1  (24497) BEREST[08] = 0000   BE BANK RESET Address

5FB3  (24499) BEFLGS[08] = 00     BE BANK DEVICE FLAGS

5FB4  (24500) BEBPRI[08] = 00     BE BANK BOOT Priority

5FB5  (24501) BEIPRI[08] = 00     BE BANK INTERRUPT Priority
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EXPANSION BANK # 09

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HEX    DEC     LABEL         VALUE   COMMENT

5FB6  (24502) BETYPE[09] = 00      BE BANK Type

5FB7  (24503) BENUMB[09] = 00      BE BANK Number

5FB8  (24504) BEDEID[09] = 00      BE BANK Dev.ID Specification ''

5FB9  (24505) BEOPND[09] = 0000    BE BANK OPEN Address

5FBB  (24507) BECLOS[09] = 0000    BE BANK CLOSE Address

5FBD  (24509) BESLCT[09] = 0000    BE BANK SELECT Address

5FBF  (24511) BERDCH[09] = 0000    BE BANK INPUT Address

5FC1  (24513) BEWRCH[09] = 0000    BE BANK OUTPUT Address

5FC3  (24515) BESLVM[09] = 0000    BE BANK DISK SLVM-CFME Commands Address

5FC5  (24517) BEINTR[09] = 0000    BE BANK INTERRUPT Handler

5FC7  (24519) BEINIT[09] = 0000    BE BANK INIT Address

5FC9  (24521) BEREST[09] = 0000    BE BANK RESET Address

5FCB  (24523) BEFLGS[09] = 00      BE BANK DEVICE FLAGS

5FCC  (24524) BEBPRI[09] = 00      BE BANK BOOT Priority

5FCD  (24525) BEIPRI[09] = 00      BE BANK INTERRUPT Priority
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EXPANSION BANK # 10

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HEX    DEC     LABEL        VALUE   COMMENT

5FCE  (24526) BETYPE[10] = 00      BE BANK Type

5FCF  (24527) BENUMB[10] = 00      BE BANK Number

5FD0  (24528) BEDEID[10] = 00      BE BANK Dev.ID Specification '' 

5FD1  (24529) BEOPND[10] = 0000    BE BANK OPEN Address

5FD3  (24531) BECLOS[10] = 0000    BE BANK CLOSE Address

5FD5  (24533) BESLCT[10] = 0000    BE BANK SELECT Address

5FD7  (24535) BERDCH[10] = 0000    BE BANK INPUT Address

5FD9  (24537) BEWRCH[10] = 0000    BE BANK OUTPUT Address

5FDB  (24539) BESLVM[10] = 0000    BE BANK DISK SLVM-CFME Commands Address

5FDD  (24541) BEINTR[10] = 0000    BE BANK INTERRUPT Handler

5FDF  (24543) BEINIT[10] = 0000    BE BANK INIT Address

5FE1  (24545) BEREST[10] = 0000    BE BANK RESET Address

5FE3  (24547) BEFLGS[10] = 00      BE BANK DEVICE FLAGS

5FE4  (24548) BEBPRI[10] = 00      BE BANK BOOT Priority

5FE5  (24549) BEIPRI[10] = 00      BE BANK INTERRUPT Priority
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EXPANSION WORKING AREA / BANK # 11

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HEX	DEC	LABEL	VALUE	COMMENT
5FE6	(24550)	BETYPE[11] =	00	BE BANK Type
5FE7	(24551)	BENUMB[11] =	00	BE BANK Number
5FE8	(24552)	BEDEID[11] =	00	BE BANK Dev.ID Specification ''
5FE9	(24553)	BEOPND[11] =	0000	BE BANK OPEN Address
5FEB	(24555)	BECLOS[11] =	0000	BE BANK CLOSE Address
5FED	(24557)	BESLCT[11] =	0000	BE BANK SELECT Address
5FEF	(24559)	BERDCH[11] =	0000	BE BANK INPUT Address
5FF1	(24561)	BEWRCH[11] =	0000	BE BANK OUTPUT Address
5FF3	(24563)	BESLVM[11] =	0000	BE BANK DISK SLVM-CFME Commands Address
5FF5	(24565)	BEINTR[11] =	0000	BE BANK INTERRUPT Handler
5FF7	(24567)	BEINIT[11] =	0000	BE BANK INIT Address
5FF9	(24569)	BEREST[11] =	0000	BE BANK RESET Address
5FFB	(24571)	BEFLGS[11] =	00	BE BANK DEVICE FLAGS
5FFC	(24572)	BEBPRI[11] =	00	BE BANK BOOT Priority
5FFD	(24573)	BEIPRI[11] =	00	BE BANK INTERRUPT Priority

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HEX	DEC	LABEL	VALUE	COMMENT
5FFE	(24574)	BETEOT	= 00	BE End of Table Marker
5FFF	(24575)	BELBN	= 00	BE Bank Number Variable

HEX	DEC	LABEL	VALUE	COMMENT
65CE	(26062)	BSSP	= 65CE	Bank Selection Stack Pointer
6315	(25365)	BS_MAX_BANK	= 00	Bank Selection Max Banks

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--------------------------------------------------------------------------
```

STACK POINTER VALUES

HEX	DEC	LABEL		VALUE	COMMENT
61FE	(25086)	SP [0]	=	3E00	; Push Initial TOP VALUE 3E00h
61FC	(25084)	SP [1]	=	0E3A	; LED18 EDIT_K Return Address
61FA	(25082)	SP [2]	=	61FC	; Push (ERRSP) Value
61F8	(25080)	SP [3]	=	0BE5	; Push ED_ERR Return Address
61F6	(25078)	SP [4]	=	0A91	; ED_LOOP RDCH Return Address
61F4	(25076)	SP [5]	=	11DC	; WAIT_KEY1 INCH Return Address

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CHANNEL TABLE LOCATED IN IN DRIVERS

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HEX	DEC	LABEL	VALUE	COMMENT
6840	(26688)		= 0500	; SENDTV
6842	(26690)		= 0C0E	; IN_K
6844	(26692)		= 4B	; "K"
6845	(26693)		= 0500	; SENDTV
6847	(26695)		= 11BF	; REPORT_J
6849	(26697)		= 53	; "S"
684A	(26698)		= 0AE7	; INSA
684C	(26700)		= 11BF	; REPORT_J
684E	(26702)		= 52	; "R"
684F	(26703)		= 0500	; SENDTV
6851	(26705)		= 11BF	; REPORT_J
6853	(26707)		= 50	; "P"
6854	(26708)		= 80	; END OF TABLE

```
_____

BASIC AREA

_____
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HEX	DEC	LABEL	VALUE	COMMENT
6855	(26709)		= 00	; BASIC AREA (PROG)
6856	(26710)		= 80	; END OF BASIC/VARS AREA
6857	(26711)		= 0D	; EDIT AREA (ELINE)
6858	(26712)		= 80	; END OF EDIT LINE AREA

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                  _____

                  USER DEFINE GRAPHICS TABLE (UDG)

                  _____



HEX    DEC    LABEL        VALUE   COMMENT

FF58  (65368)  UDG144 [0] = 00     ;

FF59  (65369)  UDG144 [1] = 3C     ;    ****

FF5A  (65370)  UDG144 [2] = 42     ;    *    *

FF5B  (65371)  UDG144 [3] = 42     ;    *    *

FF5C  (65372)  UDG144 [4] = 7E     ;    ******

FF5D  (65373)  UDG144 [5] = 42     ;    *    *

FF5E  (65374)  UDG144 [6] = 42     ;    *    *

FF5F  (65375)  UDG144 [7] = 00     ;
                  _____

FF60  (65376)  UDG145 [0] = 00     ;

FF61  (65377)  UDG145 [1] = 7C     ;    *****

FF62  (65378)  UDG145 [2] = 42     ;    *    *

FF63  (65379)  UDG145 [3] = 7C     ;    *****

FF64  (65380)  UDG145 [4] = 42     ;    *    *

FF65  (65381)  UDG145 [5] = 42     ;    *    *

FF66  (65382)  UDG145 [6] = 7C     ;    *****

FF67  (65383)  UDG145 [7] = 00     ;
                  _____

FF68  (65384)  UDG146 [0] = 00     ;

FF69  (65385)  UDG146 [1] = 3C     ;    ****

FF6A  (65386)  UDG146 [2] = 42     ;    *    *

FF6B  (65387)  UDG146 [3] = 40     ;    *

FF6C  (65388)  UDG146 [4] = 40     ;    *

FF6D  (65389)  UDG146 [5] = 42     ;    *    *

FF6E  (65390)  UDG146 [6] = 3C     ;    ****

FF6F  (65391)  UDG146 [7] = 00     ;
                  _____
```

HEX	DEC	LABEL	VALUE	COMMENT
FF70	(65392)	UDG147 [0] = 00	;	
FF71	(65393)	UDG147 [1] = 78	;	****
FF72	(65394)	UDG147 [2] = 44	;	* *
FF73	(65395)	UDG147 [3] = 42	;	* *
FF74	(65396)	UDG147 [4] = 42	;	* *
FF75	(65397)	UDG147 [5] = 44	;	* *
FF76	(65398)	UDG147 [6] = 78	;	****
FF77	(65399)	UDG147 [7] = 00	;	

HEX	DEC	LABEL	VALUE	COMMENT
FF78	(65400)	UDG148 [0] = 00	;	
FF79	(65401)	UDG148 [1] = 7E	;	******
FF7A	(65402)	UDG148 [2] = 40	;	*
FF7B	(65403)	UDG148 [3] = 7C	;	*****
FF7C	(65404)	UDG148 [4] = 40	;	*
FF7D	(65405)	UDG148 [5] = 40	;	*
FF7E	(65406)	UDG148 [6] = 7E	;	******
FF7F	(65407)	UDG148 [7] = 00	;	

HEX	DEC	LABEL	VALUE	COMMENT
FF80	(65408)	UDG149 [0] = 00	;	
FF81	(65409)	UDG149 [1] = 7E	;	******
FF82	(65410)	UDG149 [2] = 40	;	*
FF83	(65411)	UDG149 [3] = 7C	;	*****
FF84	(65412)	UDG149 [4] = 40	;	*
FF85	(65413)	UDG149 [5] = 40	;	*
FF86	(65414)	UDG149 [6] = 40	;	*
FF87	(65415)	UDG149 [7] = 00	;	

```
HEX    DEC     LABEL         VALUE   COMMENT

FF88  (65416)  UDG150 [0] = 00    ;
FF89  (65417)  UDG150 [1] = 3C    ;    ****
FF8A  (65418)  UDG150 [2] = 42    ;   *    *
FF8B  (65419)  UDG150 [3] = 40    ;   *
FF8C  (65420)  UDG150 [4] = 4E    ;   *  ***
FF8D  (65421)  UDG150 [5] = 42    ;   *    *
FF8E  (65422)  UDG150 [6] = 3C    ;    ****
FF8F  (65423)  UDG150 [7] = 00    ;
_____

FF90  (65424)  UDG151 [0] = 00    ;
FF91  (65425)  UDG151 [1] = 42    ;   *    *
FF92  (65426)  UDG151 [2] = 42    ;   *    *
FF93  (65427)  UDG151 [3] = 7E    ;   ******
FF94  (65428)  UDG151 [4] = 42    ;   *    *
FF95  (65429)  UDG151 [5] = 42    ;   *    *
FF96  (65430)  UDG151 [6] = 42    ;   *    *
FF97  (65431)  UDG151 [7] = 00    ;
_____

FF98  (65432)  UDG152 [0] = 00    ;
FF99  (65433)  UDG152 [1] = 3E    ;    *****
FF9A  (65434)  UDG152 [2] = 08    ;      *
FF9B  (65435)  UDG152 [3] = 08    ;      *
FF9C  (65436)  UDG152 [4] = 08    ;      *
FF9D  (65437)  UDG152 [5] = 08    ;      *
FF9E  (65438)  UDG152 [6] = 3E    ;    *****
FF9F  (65439)  UDG152 [7] = 00    ;
_____
```

```
HEX    DEC     LABEL        VALUE   COMMENT

FFA0  (65440)  UDG153 [0] = 00    ;
FFA1  (65441)  UDG153 [1] = 02    ;          *
FFA2  (65442)  UDG153 [2] = 02    ;          *
FFA3  (65443)  UDG153 [3] = 02    ;          *
FFA4  (65444)  UDG153 [4] = 42    ;    *     *
FFA5  (65445)  UDG153 [5] = 42    ;    *     *
FFA6  (65446)  UDG153 [6] = 3C    ;     ****
FFA7  (65447)  UDG153 [7] = 00    ;
_____

FFA8  (65448)  UDG154 [0] = 00    ;
FFA9  (65449)  UDG154 [1] = 44    ;    *   *
FFAA  (65450)  UDG154 [2] = 48    ;    *  *
FFAB  (65451)  UDG154 [3] = 70    ;    ***
FFAC  (65452)  UDG154 [4] = 48    ;    *  *
FFAD  (65453)  UDG154 [5] = 44    ;    *   *
FFAE  (65454)  UDG154 [6] = 42    ;    *    *
FFAF  (65455)  UDG154 [7] = 00    ;
_____

FFB0  (65456)  UDG155 [0] = 00    ;
FFB1  (65457)  UDG155 [1] = 40    ;    *
FFB2  (65458)  UDG155 [2] = 40    ;    *
FFB3  (65459)  UDG155 [3] = 40    ;    *
FFB4  (65460)  UDG155 [4] = 40    ;    *
FFB5  (65461)  UDG155 [5] = 40    ;    *
FFB6  (65462)  UDG155 [6] = 7E    ;    ******
FFB7  (65463)  UDG155 [7] = 00    ;
_____
```

```
HEX    DEC     LABEL       VALUE   COMMENT

FFB8  (65464)  UDG156 [0] = 00    ;
FFB9  (65465)  UDG156 [1] = 42    ;    *     *
FFBA  (65466)  UDG156 [2] = 66    ;    **   **
FFBB  (65467)  UDG156 [3] = 5A    ;    * ** *
FFBC  (65468)  UDG156 [4] = 42    ;    *     *
FFBD  (65469)  UDG156 [5] = 42    ;    *     *
FFBE  (65470)  UDG156 [6] = 42    ;    *     *
FFBF  (65471)  UDG156 [7] = 00    ;
_____

FFC0  (65472)  UDG157 [0] = 00    ;
FFC1  (65473)  UDG157 [1] = 42    ;    *     *
FFC2  (65474)  UDG157 [2] = 62    ;    **    *
FFC3  (65475)  UDG157 [3] = 52    ;    * *   *
FFC4  (65476)  UDG157 [4] = 4A    ;    *   * *
FFC5  (65477)  UDG157 [5] = 46    ;    *    **
FFC6  (65478)  UDG157 [6] = 42    ;    *     *
FFC7  (65479)  UDG157 [7] = 00    ;
_____

FFC8  (65480)  UDG158 [0] = 00    ;
FFC9  (65481)  UDG158 [1] = 3C    ;     ****
FFCA  (65482)  UDG158 [2] = 42    ;    *     *
FFCB  (65483)  UDG158 [3] = 42    ;    *     *
FFCC  (65484)  UDG158 [4] = 42    ;    *     *
FFCD  (65485)  UDG158 [5] = 42    ;    *     *
FFCE  (65486)  UDG158 [6] = 3C    ;     ****
FFCF  (65487)  UDG158 [7] = 00    ;
_____
```

HEX	DEC	LABEL	VALUE	COMMENT

FFD0 (65488) UDG159 [0] = 00 ;

FFD1 (65489) UDG159 [1] = 7C ; *****

FFD2 (65490) UDG159 [2] = 42 ; *   *

FFD3 (65491) UDG159 [3] = 42 ; *   *

FFD4 (65492) UDG159 [4] = 7C ; *****

FFD5 (65493) UDG159 [5] = 40 ; *

FFD6 (65494) UDG159 [6] = 40 ; *

FFD7 (65495) UDG159 [7] = 00 ;

_____

FFD8 (65496) UDG160 [0] = 00 ;

FFD9 (65497) UDG160 [1] = 3C ; ****

FFDA (65498) UDG160 [2] = 42 ; *   *

FFDB (65499) UDG160 [3] = 42 ; *   *

FFDC (65500) UDG160 [4] = 52 ; * * *

FFDD (65501) UDG160 [5] = 4A ; * * *

FFDE (65502) UDG160 [6] = 3C ; ****

FFDF (65503) UDG160 [7] = 00 ;

_____

FFE0 (65504) UDG161 [0] = 00 ;

FFE1 (65505) UDG161 [1] = 7C ; *****

FFE2 (65506) UDG161 [2] = 42 ; *   *

FFE3 (65507) UDG161 [3] = 42 ; *   *

FFE4 (65508) UDG161 [4] = 7C ; *****

FFE5 (65509) UDG161 [5] = 44 ; *   *

FFE6 (65510) UDG161 [6] = 42 ; *   *

FFE7 (65511) UDG161 [7] = 00 ;

_____

```
HEX    DEC    LABEL       VALUE  COMMENT

FFE8  (65512) UDG162 [0] = 00    ;
FFE9  (65513) UDG162 [1] = 3C    ;     ****
FFEA  (65514) UDG162 [2] = 40    ;   *
FFEB  (65515) UDG162 [3] = 3C    ;     ****
FFEC  (65516) UDG162 [4] = 02    ;           *
FFED  (65517) UDG162 [5] = 42    ;   *     *
FFEE  (65518) UDG162 [6] = 3C    ;     ****
FFEF  (65519) UDG162 [7] = 00    ;
      _____

FFF0  (65520) UDG163 [0] = 00    ;
FFF1  (65521) UDG163 [1] = FE    ;  *******
FFF2  (65522) UDG163 [2] = 10    ;      *
FFF3  (65523) UDG163 [3] = 10    ;      *
FFF4  (65524) UDG163 [4] = 10    ;      *
FFF5  (65525) UDG163 [5] = 10    ;      *
FFF6  (65526) UDG163 [6] = 10    ;      *
FFF7  (65527) UDG163 [7] = 00    ;
      _____

FFF8  (65528) UDG164 [0] = 00    ;
FFF9  (65529) UDG164 [1] = 42    ;   *     *
FFFA  (65530) UDG164 [2] = 42    ;   *     *
FFFB  (65531) UDG164 [3] = 42    ;   *     *
FFFC  (65532) UDG164 [4] = 42    ;   *     *
FFFD  (65533) UDG164 [5] = 42    ;   *     *
FFFE  (65534) UDG164 [6] = 3C    ;     ****
FFFF  (65535) UDG164 [7] = 00    ;
      _____

END
```